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Examiner Interview

Applicants thank the Examiner for conducting a telephone interview with their attorney on July 31, 2002. During the interview, Applicants' attorney and the Examiner discussed the Official Action dated June 4, 2002 ("Official Action"), and more specifically whether claims 13 and 19 have adequate support in the specification. During the discussion, Applicants' attorney identified for the Examiner the portion of the specification disclosing that a lower value for the slow hop counter indicates a higher signal quality, not a lower signal quality. And thus, a value of the slow hop counter that exceeds the slow hop threshold indicates a superior signal quality compared to the signal quality indicated by a slow hop counter value that is below the slow hop threshold. This explanation was made to correct the Examiner's misunderstanding of how a slow hop counter indicates the signal quality. The reasons stated in the June 4, 2002 Office Action for the §112, ¶1 rejections indicated that a correct understanding of that aspect of the invention would remove the rejections, as explained in greater detail below under the heading, "Section §112 rejection"

During the interview, the Examiner acknowledged that a lower value for the slow hop counter indicates a higher line quality, and vice versa, as explained by Applicants' attorney. However, rather than conceding that claims 13 and 19 are allowable - because the Examiner had stated no other basis for rejecting these claims - the Examiner argued during the interview *for the first time* that the specification does not show a "... pre-determined threshold [of the quality of an initial signal]," as recited by claim 13 and a "... pre-determined threshold [of the quality of an initial signal]," as recited by claim 19. But this is incorrect, as the specification does show the alleged missing limitations of claims 13 and 19.¹ The Examiner has even conceded this in the prior Office Action dated June 4, 2002. The Examiner acknowledged that the "pre-determined threshold" of claim 13 is disclosed by the "slow hop threshold" of the specification when the Examiner stated in the Office Action dated June 4, 2002 regarding claim 13 that "the specification teaches at best . . . [requesting reduced power]

¹ See Fig. 3. Decision block 304.

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when the line quality for the initial signal . . . is inferior to the predetermined threshold (slow hop threshold)," [underlined bold-print emphasis added]. The Examiner also made an analogous acknowledgement that the "pre-determined threshold" of claim 19 is disclosed by the specification when the Examiner stated in the Office Action dated June 4, 2002 regarding claim 19 that "the specification teaches at best . . . [requesting maximum power] when the line quality for the initial signal . . . is superior to the predetermined threshold (slow hop threshold)." Thus, claims 13, 19, and other claims rejected for analogous reasons are allowable. If the Examiner desires to reject claims 13 and 19 based on new § 112 grounds not previously argued in an Office Action, Applicants request that the Examiner issue a new, non-final Office Action as required by the M.P.E.P.

Section 112 Rejections

The Examiner continues to reject claims 13, 16-27 and 31-33 under 35 U.S.C. § 112, ¶ 1 for allegedly containing subject matter that was not described in the specification in such a way as to reasonably convey that the inventors had possession of the claimed invention at the time the application was filed. (Office Action § 3). The Examiner appears to have misunderstood Applicants description in the specification of one example of how a slow hop counter makes an indication of signal quality, and based on this misunderstanding determined that the rejected claims are inconsistent with that description. As demonstrated below, the claims are completely consistent with, and fully supported by, the specification.

The Examiner rejects claim 13 asserting that the specification does not support the limitation of "transmitting from the second component to the first component a request for the first component to transmit a subsequent signal at a second power level, the second power level less than the first power level, **when the quality of the initial signal is superior to a pre-determined threshold and the communication strength is greater than a specified range,**" (emphasis added) as recited by claim 13. Using

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FIGURE 3, the Examiner argues that "the specification teaches at best at page 17, lines 14-26 the second power level at branch (332) less than the first power level, when the line quality for the initial signal in decision element 304 is inferior to a predetermined threshold (slow hop threshold) and the communication strength (RSSI) in decision box 330 is greater than a specified range (desired range)." The Examiner bold-prints the word "inferior" to suggest that the specification teaches the opposite of what is claimed in claim 13. This statement, in view of what is actually disclosed in FIGURE 3 (elements 304, 330, and 332), indicates to Applicants that the Examiner mistakenly believes that a value for a line quality indicator that is less than a threshold shows inferior initial signal. This mistaken belief is the cause of the erroneous §112 rejection of claim 13.

Contrary to the Examiner's misunderstanding, a lower value for the slow hop counter indicates a higher line quality, not a lower line quality, in some embodiments of the invention. Page 13, lines 26-28 of the specification states that the value for a slow hop counter is obtained from the line quality indicators. ("The values for all counters 200, 202, 210 and 212 [note: counters 202 and 212 are slow hop counters] are based on the line quality indicators from the line quality monitor 198." – pg 13, Ins. 26-28). And lines 23-25 on the same page state that a "higher value for a line quality indicator corresponds to a lower quality signal." – pg. 13, Ins. 23-25. Thus, a lower value for the line quality indicator indicates a higher quality signal. Because the value for the slow hop counter is based on the value of the line quality indicator, a value for the slow hop counter that is less than a predetermined threshold indicates a higher – or superior – line quality than a value for the slow hop counter that exceeds the predetermined threshold.

With the correct understanding that a lower value of a slow hop counter indicates a superior quality signal, the portion of the specification identified by the Examiner in rejecting claim 13 in fact supports claim 13's allowance. For example, decision elements 304, 330, and 332, identified by the Examiner, teach that when the slow hop counter value is not greater than a threshold – thus, a higher line quality – and RSSI is

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not less than a desired range, reduced power is requested. This supports what is claimed by claim 13; namely, "transmitting . . . a request for the first component to transmit a subsequent signal at a second [lower] power level, . . . when the quality of the initial signal is superior"

In the "Response to Argument" section of the Office Action, the Examiner states that "as acknowledged by Applicant . . . the specification teaches at best that a slow hop . . . [procedure] is initiated only when the line quality monitor summed over a predetermined amount of time reaches a value less than a threshold . . . " (pg. 5, Office Action)." [emphasis added]. With the correct understanding some embodiments of the invention that a lower value of slow hop counter indicates a superior – not inferior - line quality, the identified Examiner's statement supports the Applicants' position that claim 13 is fully supported by the specification. Reconsideration and favorable action are requested.

Claims 26 and 31 are allowable for reasons analogous to those provided in conjunction with claim 13. Reconsideration and favorable action are requested.

As depending from allowable independent 13, claims 16-18 and 20 are also allowable. Reconsideration and favorable action are requested.

Claim 19 is improperly rejected for the same misunderstanding of how the slow hop counter makes an indication of signal quality. The Examiner continues to reject claim 19 asserting that the specification does not support the limitation of "transmitting from the second component to the first component a request for the first component to transmit a subsequent signal at the maximum power level when the quality of the initial signal is inferior to the pre-determined threshold and the first power level is a non-maximum power level," as recited by claim 19. Using FIGURE 3, the Examiner argues that "the specification teaches at best at page 16, lines 17-21, the first component is requested to transmit at maximum power when the line quality for the initial signal in decision element 304 is **superior** to the predetermined threshold (slow hop threshold) and the first power is non maximum in decision 306." The Examiner bold-prints the word "superior" to suggest that the specification teaches the opposite of what is claimed

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in claim 19. In the "Response to Argument" section, the Examiner further states that "as noted by Applicant . . . the specification teaches at best if the slow hop counter, is greater than a threshold fig. 3, 304 and if the other unit i[s] not transmitting at maximum power, fig. 3, 306 request the other unit to transmitting at maximum power fig. 3, 322" (pg. 5, Office Action). These statements indicate to Applicants that the Examiner made the same mistake as he did in rejecting claim 13; namely, the mistaken belief that the sum of the line quality indicator that is less than the threshold shows inferior initial signal. This mistaken belief is also the cause of the erroneous §112, ¶1 rejection of claim 19.

With the correct understanding that a lower value of slow hop counter indicates a superior quality signal – not an inferior quality signal - the Examiner's statement that the specification shows "if [the value of] the slow hop counter . . . is greater than a threshold . . . and if the other unit . . . [is] not transmitting at maximum power, . . . [a] request [is made to] the other unit to . . . [transmit] at maximum power . . ." (see pg. 5, Office Action) supports Applicants' position that claim 19 is fully supported by the specification. Reconsideration and favorable action are requested.

Claims 21 and 32 are allowable for reasons analogous to those provided in conjunction with claim 19. Reconsideration and favorable action are requested.

As depending from allowable claims 21 and 32, claims 22-25, 27 and 33 are also allowable. Reconsideration and favorable action are requested.

Section 103 Rejections

The Examiner rejects claims 28-30 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,249,683 issued to Lundby et al. ("*Lundby*") in view of U.S. Patent No. 5,999,832 issued to Vannatta et al ("*Vannatta*"). Applicants respectfully traverse these rejections for the reasons discussed below.

Claim 28 is improperly rejected because *Lundby* does not teach or suggest "determining the quality of the initial signal [transmitted from the first component] at the second component by summing consecutive line quality indicators over a pre-

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determined period of time," as recited by claim 28. Column 10, lines 4-8 of *Lundby*, which the Examiner identifies as showing the missing limitation, actually shows summing the one signal-to-noise ratio of each data stream where a combination of data streams 120 and 120A is monitored. Summing the one signal-to-noise ratio corresponding to each data stream to monitor a combination of data streams, as taught by *Lundby*, is not "... summing consecutive line quality indicators [of an initial signal transmitted from a first component] over a pre-determined period of time." Further, generating power control commands based on the received signal-to-noise ratio or frame error rate of a data stream, as taught by *Lundby*, does not show the act of "determining the quality of the initial signal" *Vannatta* also does not show the missing limitation and the Examiner does not assert that it does. Thus, the combination of *Lundby* and *Vannatta* does not show the missing limitation and claim 28 is allowable. Reconsideration and favorable action are requested.

As depending from allowable independent claim 28, dependent claims 29-30 are also allowable. Reconsideration and favorable action are requested.

Conclusion

Applicants respectfully request allowance of all pending claims. If the Examiner feels that the prosecution of this Application can be advanced in any manner by a telephone conference, Applicants respectfully request that the Examiner call their attorney at the number listed below.

SIEMENS CORPORATION
Intellectual Property Department
186 Wood Avenue South
Iselin, New Jersey 08830
ATTENTION: Elsa Keller, IP Department
Telephone: (732) 321-3026

Respectfully requested,

By: Thomas George
Thomas George
Registration No. 45,740
Attorney for Applicants
Tel: 650-694-5191
Fax: 650-968-4517